

Notice of variation and consolidation with introductory note

The Environmental Permitting (England & Wales) Regulations 2010

Oxford Renewable Energy Limited
Agrivert Cassington Anaerobic Digestion Facility
Worton Farm
Yarnton
Oxfordshire
OX29 4EB

Variation application number

EPR/TP3231KR/V005

Permit number

EPR/TP3231KR

Agrivert Cassington Anaerobic Digestion Facility

Permit number EPR/TP3231KR

Introductory note

This introductory note does not form a part of the notice.

Under the Environmental Permitting (England & Wales) Regulations 2010 (schedule 5, part 1, paragraph 19) a variation may comprise a consolidated permit reflecting the variations and a notice specifying the variations included in that consolidated permit.

Schedule 1 of the notice specifies the conditions that have been varied and schedule 2 comprises a consolidated permit which reflects the variations being made. All the conditions of the permit have been varied and are subject to the right of appeal.

The Industrial Emissions Directive (IED) was transposed in England and Wales by the Environmental Permitting (England and Wales)(Amendment) Regulations 2013 on 27 February 2013. This variation implements the changes brought about by the IED for “existing facilities operating newly prescribed activities” and completes the transition of this facility from a waste operation to an IED Installation.

The annual tonnages of organic waste received by the Cassington Anaerobic Facility is approximately 60,000. It is expected that the facility will produce 18396Mwh per year or 2.1Mw per hour of electricity.

The facility comprises a waste reception building with neighbouring office and welfare facilities, three digestion and two storage tanks, a water scrubber and a biofilter (for filtration of the air in the reception building), two weighbridges, two gas engine units exceeding 3MW of thermal input, three transformers, accelerator, storage tank, energy crop storage area, energy crop feeder and a digestate storage lagoon.

This covers an area of 2.0 hectares.

Solid waste is delivered to the reception building where negative pressure is maintained by use of an odour control system. The waste is deposited into a reception bunker equipped with a moving floor which moves it to a screw conveyor system. This delivers the waste to a hammermill which depackages it and macerates it. Liquid waste is delivered into either one of two underground storage tanks. The liquid waste is macerated prior to mixing in with the solid waste in a pre-mixing tank or macerated in the hammermill.

After blending in the pre-mixing tank, waste is pumped into the pasteurisers for pasteurisation. Pasteurisation at the site involves using heat from the gas engines and heating the tank contents to 72degrees C for 1 hour. It is then stored in the post pasteurisation tank prior to introduction into the Primary Digesters.

The material then goes to two primary digesters and a secondary digester where 80% of the biogas is extracted in a digester with a capacity of 4,182m³ and is stirred by propeller stirrers situated on each side of the circular tank and one paddle stirrer situated within the tank. The stirrers operate on a periodic basis in order to keep the digester contents mixed to ensure that the mix optimises biogas yield but with out excessive energy consumption. Longer term storage is in the lagoons. The digestate is displaced from the primary digester and then fed into the secondary digester where approximately 20% of the biogas is extracted.

The biogas produced by the digesters is naturally high in sulphides and requires reduction. The first stage of reduction is carried out within the digesters where two sulphide control stages are carried out. The third stage is an automatic carbon filter adjacent to the CHP. Once these three stages have been completed the biogas has had a significant reduction in overall sulphur content and is normally ready for use in the gas engine. The biogas is then compressed and dehumidified prior to an introduction into the gas engine.

The gas engine receives the biogas and uses it as a conventional fuel in powering a generator unit to produce electricity at 415 volts. The output of the generator is dependent on the rpm of the gas engine. Should there be too much biogas for the gas storage and the gas engine, then it is flared at a remote stack.

Excess heat could be used to dry woodchip. If there is too much excessive heat then it is cooled through standard cooling radiators. The gas engine exhaust is piped through a 9m tall flue that rises on the outside of the insulated container. The power generated by the gas engines is transmitted via transformers directly into the National Grid via a high voltage connection.

Digestate is stored within two storage tanks which are fitted with gas roofs to capture any gas that may be emitted during storage, thereby maximising energy production. The digestate is used for spreading on land as a fertilizer after pumping into a transportation container to remove it to the selected field. Additionally, digestate from the facility is also stored within a storage lagoon with a total storage capacity of 20,000m³. The lagoon is lined with 2.5mm HDPE and the liner is secured with an anchor ditch at the top of the bund. The lagoon has an Aerocover floating media cover to control odour and nitrogen losses. Digestate is pumped in at night under the liquid layer. The digestate will only be stirred if separation is observed at extraction

The schedules specify the changes made to the permit.

The status log of a permit sets out the permitting history, including any changes to the permit reference number.

| Status log of the permit | | |
|--|-------------------------|--|
| Description | Date | Comments |
| Application TP3231KR (EAWML 400044) (EPR/TP3231KR/A001) | Duly made 14/01/2010 | |
| Schedule 5 request for further information sent 23/06/2010 | 30/06/2010 | Email containing information to support Schedule 5 response |
| Schedule 5 request for further information sent 23/06/2010 | 13/07/2010 | Schedule 5 Response received |
| Permit Determined EPR/TP3231KP/V001 | 04/08/2010 | |
| Variation Application EPR/TP3231KR/V002 | Duly made 06/10/2010 | |
| Variation Determined EPR/TP3231KP/V002 | 16/12/2010 | Variation to include a digestate storage lagoon |
| Variation Application EPR/TP3231KR/V003 | Duly made 10/02/2012 | |
| Variation Determined EPR/TP3231KP/V003 | 16/04/2012 | Agency initiated variation to amend conditions relating to the waste table and adding waste codes. |
| Agency Variation Determined EPR/TP3231KR/V004 | 03/04/2013 | Agency variation to implement the changes introduced by IED |
| Variation Application EPR/TP3231KP/V005 | Duly made 08/09/2014 | Application to vary and update permit to comply with changes brought about by the IED |
| Variation Determined EPR/TP3231KP/V005 (Billing Ref: NP3134WU) | 09/10/2015 | |

End of introductory note

Notice of variation and consolidation

The Environmental Permitting (England and Wales) Regulations 2010

The Environment Agency in exercise of its powers under regulation 20 of the Environmental Permitting (England and Wales) Regulations 2010 varies and consolidates

Permit number

EPR/TP3231KR

Issued to

Oxford Renewable Energy Limited (“the operator”)

whose registered office is

The Stables

Radford

Chipping Norton

Oxfordshire

OX7 4EB

company registration number **6551045**

to operate a regulated facility at

Agrivert Cassington Anaerobic Digestion Facility

Worton Farm

Yarnton

Oxfordshire

OX29 4EB

to the extent set out in the schedules.

The notice shall take effect from 09/10/2015

| Name | Date |
|-----------------------|-------------------|
| Rebecca Warren | 09/10/2015 |

Authorised on behalf of the Environment Agency

Schedule 1

All conditions have been varied by the consolidated permit as a result of the application made by the operator

Schedule 2 – consolidated permit

Consolidated permit issued as a separate document.

Permit

The Environmental Permitting (England and Wales) Regulations 2010

Permit number

EPR/TP3231KR

This is the consolidated permit referred to in the variation and consolidation notice for application EPR/TP3231KR/V004 authorising,

Oxford Renewable Energy Limited (“the operator”),

whose registered office is

The Stables

Radford

Chipping Norton

Oxfordshire

OX7 4EB

company registration number 6551045

to operate an installation at

Agrivert Cassington Anaerobic Digestion Facility

Worton Farm

Yarnton

Oxfordshire

OX29 4EB

to the extent authorised by and subject to the conditions of this permit.

| Name | Date |
|-----------------------|-------------------|
| Rebecca Warren | 09/10/2015 |

Authorised on behalf of the Environment Agency

Conditions

Management

1.1 General management

- 1.1.1 The operator shall manage and operate the activities:
- (a) in accordance with a written management system that identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents, non-conformances, closure and those drawn to the attention of the operator as a result of complaints; and
 - (b) using sufficient competent persons and resources.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.
- 1.1.4 The operator shall comply with the requirements of an approved competence scheme.

1.2 Energy efficiency

- 1.2.1 The operator shall:
- (a) take appropriate measures to ensure that energy is used efficiently in the activities;
 - (b) review and record at least every four years whether there are suitable opportunities to improve the energy efficiency of the activities; and
 - (c) take any further appropriate measures identified by a review.

1.3 Efficient use of raw materials

- 1.3.1 The operator shall:
- (a) take appropriate measures to ensure that raw materials and water are used efficiently in the activities;
 - (b) maintain records of raw materials and water used in the activities;
 - (c) review and record at least every four years whether there are suitable alternative materials that could reduce environmental impact or opportunities to improve the efficiency of raw material and water use; and
 - (d) take any further appropriate measures identified by a review.

1.4 Avoidance, recovery and disposal of wastes produced by the activities

- 1.4.1 The operator shall take appropriate measures to ensure that:
- (a) the waste hierarchy referred to in Article 4 of the Waste Framework Directive is applied to the generation of waste by the activities; and
 - (b) any waste generated by the activities is treated in accordance with the waste hierarchy referred to in Article 4 of the Waste Framework Directive; and
 - (c) where disposal is necessary, this is undertaken in a manner which minimises its impact on the environment.

- 1.4.2 The operator shall review and record at least every four years whether changes to those measures should be made and take any further appropriate measures identified by a review.

Operations

2.1 Permitted activities

- 2.1.1 The operator is only authorised to carry out the activities specified in schedule 1 table S1.1 (the “activities”).

2.2 The site

- 2.2.1 The activities shall not extend beyond the site, being the land shown edged in green on the site plan at schedule 7 to this permit.

2.3 Operating techniques

- 2.3.1 The activities shall, subject to the conditions of this permit, be operated using the techniques and in the manner described in the documentation specified in schedule 1, table S1.2, unless otherwise agreed in writing by the Environment Agency.
- 2.3.2 If notified by the Environment Agency that the activities are giving rise to pollution, the operator shall submit to the Environment Agency for approval within the period specified, a revision of any plan or other documentation (“plan”) specified in schedule 1, table S1.2 or otherwise required under this permit which identifies and minimises the risks of pollution relevant to that plan, and shall implement the approved revised plan in place of the original from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 2.3.3 Any raw materials or fuels listed in schedule 2 table S2.1 shall conform to the specifications set out in that table.
- 2.3.4 Waste shall only be accepted if:
- (a) it is of a type and quantity listed in schedule 2 table(s) S2.2; and
 - (b) it conforms to the description in the documentation supplied by the producer and holder.
- 2.3.5 The operator shall ensure that where waste produced by the activities is sent to a relevant waste operation, that operation is provided with the following information, prior to the receipt of the waste:
- (a) the nature of the process producing the waste;
 - (b) the composition of the waste;
 - (c) the handling requirements of the waste;
 - (d) the hazardous property associated with the waste, if applicable; and
 - (e) the waste code of the waste.
- 2.3.6 The operator shall ensure that where waste produced by the activities is sent to a landfill site, it meets the waste acceptance criteria for that landfill.

2.4 Improvement programme

- 2.4.1 The operator shall complete the improvements specified in schedule 1 table S1.3 by the date specified in that table unless otherwise agreed in writing by the Environment Agency.
- 2.4.2 Except in the case of an improvement which consists only of a submission to the Environment Agency, the operator shall notify the Environment Agency within 14 days of completion of each improvement.

Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land except from the sources and emission points listed in schedule 3 tables S3.1.
- 3.1.2 The limits given in schedule 3 shall not be exceeded.
- 3.1.3 Periodic monitoring shall be carried out at least once every 5 years for groundwater and 10 years for soil, unless such monitoring is based on a systematic appraisal of the risk of contamination.

3.2 Emissions of substances not controlled by emission limits

- 3.2.1 Emissions of substances not controlled by emission limits (excluding odour) shall not cause pollution. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved emissions management plan, have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.2.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution, submit to the Environment Agency for approval within the period specified, an emissions management plan which identifies and minimises the risks of pollution from emissions of substances not controlled by emission limits;
 - (b) implement the approved emissions management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.
- 3.2.3 All liquids in containers, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.

3.3 Odour

- 3.3.1 Emissions from the activities shall be free from odour at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved odour management plan, to prevent or where that is not practicable to minimise the odour.
- 3.3.2 The operator shall:
- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to odour, submit to the Environment Agency for approval within the period specified, an odour management plan which identifies and minimises the risks of pollution from odour;
 - (b) implement the approved odour management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.4 Noise and vibration

- 3.4.1 Emissions from the activities shall be free from noise and vibration at levels likely to cause pollution outside the site, as perceived by an authorised officer of the Environment Agency, unless the operator has used appropriate measures, including, but not limited to, those specified in any approved noise and vibration management plan to prevent or where that is not practicable to minimise the noise and vibration.

3.4.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to pollution outside the site due to noise and vibration, submit to the Environment Agency for approval within the period specified, a noise and vibration management plan which identifies and minimises the risks of pollution from noise and vibration;
- (b) implement the approved noise and vibration management plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

3.5 Monitoring

3.5.1 The operator shall, unless otherwise agreed in writing by the Environment Agency, undertake the monitoring specified in the following tables in schedule 3 to this permit:

- (a) point source emissions specified in tables S3.1;
- (b) process monitoring specified in table S3.2;

3.5.2 The operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.

3.5.3 Monitoring equipment, techniques, personnel and organisations employed for the emissions monitoring programme and the environmental or other monitoring specified in condition 3.5.1 shall have either MCERTS certification or MCERTS accreditation (as appropriate), where available, unless otherwise agreed in writing by the Environment Agency.

3.5.4 Permanent means of access shall be provided to enable sampling/monitoring to be carried out in relation to the emission points specified in schedule 3 tables S3.1 unless otherwise agreed in writing by the Environment Agency.

3.6 Pests

3.6.1 The activities shall not give rise to the presence of pests which are likely to cause pollution, hazard or annoyance outside the boundary of the site. The operator shall not be taken to have breached this condition if appropriate measures, including, but not limited to, those specified in any approved pests management plan, have been taken to prevent or where that is not practicable, to minimise the presence of pests on the site.

3.7 Fire prevention

3.7.1 The operator shall take all appropriate measures to prevent fires on site and minimise the risk of pollution from them including, but not limited to, those specified in any approved fire prevention plan.

3.7.2 The operator shall:

- (a) if notified by the Environment Agency that the activities are giving rise to a risk of fire, submit to the Environment Agency for approval within the period specified, a fire prevention plan which prevents fires and minimises the risk of pollution from fires;
- (b) implement the fire prevention plan, from the date of approval, unless otherwise agreed in writing by the Environment Agency.

Information

4.1 Records

4.1.1 All records required to be made by this permit shall:

- (a) be legible;
- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- (d) be retained, unless otherwise agreed in writing by the Environment Agency, for at least 6 years from the date when the records were made, or in the case of the following records until permit surrender:
 - (i) off-site environmental effects; and
 - (ii) matters which affect the condition of the land and groundwater.

4.1.2 The operator shall keep on site all records, plans and the management system required to be maintained by this permit, unless otherwise agreed in writing by the Environment Agency.

4.2 Reporting

4.2.1 The operator shall send all reports and notifications required by the permit to the Environment Agency using the contact details supplied in writing by the Environment Agency.

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the Environment Agency by 31 January (or other date agreed in writing by the Environment Agency) each year. The report(s) shall include as a minimum:

- (a) a review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of that data;
- (b) the annual production/treatment data set out in schedule 4 table S4.2; and
- (c) the performance parameters set out in schedule 4 table S4.3 using the forms specified in table S4.4 of that schedule.

4.2.3 Within 28 days of the end of the reporting period the operator shall, unless otherwise agreed in writing by the Environment Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:

- (a) in respect of the parameters and emission points specified in schedule 4 table S4.1;
- (b) for the reporting periods specified in schedule 4 table S4.1 and using the forms specified in schedule 4 table S4.4 ; and
- (c) giving the information from such results and assessments as may be required by the forms specified in those tables.

4.2.4 The operator shall, unless notice under this condition has been served within the preceding four years, submit to the Environment Agency, within six months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.

4.2.5 Within 1 month of the end of each quarter, the operator shall submit to the Environment Agency using the form made available for the purpose, the information specified on the form relating to the site and the waste accepted and removed from it during the previous quarter.

4.3 Notifications

4.3.1 In the event:

- (a) that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately —
 - (i) inform the Environment Agency,

- (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
- (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) of a breach of any permit condition the operator must immediately —
 - (i) inform the Environment Agency, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1 (a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

4.3.3 Where the Environment Agency has requested in writing that it shall be notified when the operator is to undertake monitoring and/or spot sampling, the operator shall inform the Environment Agency when the relevant monitoring and/or spot sampling is to take place. The operator shall provide this information to the Environment Agency at least 14 days before the date the monitoring is to be undertaken.

4.3.4 The Environment Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:

Where the operator is a registered company:

- (a) any change in the operator's trading name, registered name or registered office address; and
- (b) any steps taken with a view to the operator going into administration, entering into a company voluntary arrangement or being wound up.

4.3.5 Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

- (a) the Environment Agency shall be notified at least 14 days before making the change; and
- (b) the notification shall contain a description of the proposed change in operation.

4.3.6 The Environment Agency shall be given at least 14 days notice before implementation of any part of the site closure plan.

4.4 Interpretation

4.4.1 In this permit the expressions listed in schedule 6 shall have the meaning given in that schedule.

4.4.2 In this permit references to reports and notifications mean written reports and notifications, except where reference is made to notification being made "immediately", in which case it may be provided by telephone.

Schedule 1 – Operations

| Table S1.1 activities | | | |
|-------------------------------------|---|---|--|
| Activity reference | Activity listed in Schedule 1 of the EP Regulations | Description of specified activity and WFD Annex I and II operations | Limits of specified activity and waste types |
| A1 | S5.4 A(1) (b) (i) Recovery or a mix of recovery and disposal of non hazardous waste with a capacity exceeding 75 tonnes per day (or 100 tonnes per day if the only waste treatment activity is anaerobic digestion) involving biological treatment | R3: Recycling/reclamation of organic substances which are not used as solvents Anaerobic digestion of permitted waste in 3 tanks followed by burning of biogas produced from the process | From receipt of permitted waste through to digestion and recovery of by-products (digestate). Anaerobic digestion of waste in tanks followed by burning of biogas produced from the process. Waste types suitable for acceptance are limited to those specified in Table S2.2. |
| Directly Associated Activity | | | |
| A2 | Storage of waste pending recovery or disposal | R13: Storage of waste pending the operations numbered R1 and R3 (excluding temporary storage, pending collection, on the site where it is produced) | From the receipt of waste to despatch for anaerobic digestion or despatch off site for recovery and/or disposal. Storage of waste in an enclosed building fitted with appropriate odour abatement and on an impermeable surface with sealed drainage. Waste types suitable for acceptance are limited to those specified in Table S2.2 |
| A3 | Physical treatment for the purpose of recycling | R3: Recycling/reclamation of organic substances which are not used as solvents | From the receipt of waste to despatch for anaerobic digestion or despatch off site for recovery. Pre-treatment of waste in enclosed building and on impermeable surface with sealed drainage system including manual shredding, sorting, screening, compaction, baling, mixing and maceration. |

| Table S1.1 activities | | | |
|------------------------------|--|--|--|
| Activity reference | Activity listed in Schedule 1 of the EP Regulations | Description of specified activity and WFD Annex I and II operations | Limits of specified activity and waste types |
| | | | <p>Post-treatment of digestate in an enclosed building and on an impermeable surface with sealed drainage system, including screening to remove contraries, centrifuge or pressing and addition of thickening agents (polymers) or drying.</p> <p>Gas cleaning by biological or chemical scrubbing.</p> <p>Waste types suitable for acceptance are limited to those specified in Table S2.2.</p> |
| A4 | Steam and electrical power supply | R1: Use principally as a fuel to generate energy | From the receipt of biogas produced at the on-site anaerobic digestion process to combustion with the release of combustion gases. |
| A5 | Emergency flare operation | D10: Incineration on land Use of 1 auxiliary flare required only during periods of breakdown | From the receipt of biogas produced at the on-site anaerobic digestion process to incineration with the release of combustion gases. Use of 1 auxiliary flare required only during periods of breakdown or maintenance. |
| A6 | Gas storage | Storage of biogas produced from on-site anaerobic digestion of permitted waste in the head space of each of the 5 digestion and digestate storage tanks. | From the receipt of biogas to despatch for use within the facility |
| A7 | Digestate storage | Storage of liquid digestate in storage lagoon | From the receipt of digestate produced from the on-site anaerobic digestion process to despatch for use off-site. Waste types suitable for acceptance are limited to those specified in Table S2.3. Storage lagoons have a freeboard of 750mm. |
| A8 | Raw material storage | Storage of raw materials | From the receipt of raw materials to despatch for use within the facility |

| Table S1.2 Operating techniques | | |
|--|--|----------------------|
| Description | Parts | Date Received |
| Document | <p>The response to questions in the following parts of the application form:</p> <p>Part B – 2a, Part B – table 1, Part B – 4a, Part B – 5a, Part B – 5b, Part B – Table 5a, Part B – Table 5b, Part B – 5e, Part B – 6, Part B – 7a, Part B – 7b, Part B – 8, Part B - Appendix 2 (parts 1 to 10)</p> <p>The following Appendix documents submitted in support of the application:</p> <p>Appendix B – Site Condition Report. Appendix C- Risk assessment and H1. Appendix G – Non-technical summary. Appendix J – Waste codes.</p> | 18/01/2010 |
| Response to Schedule 5 notice dated 23/06/10 | <p>Responses the following sections of the notice.</p> <p>Revised H1 assessment</p> <p>Answers to Part 2 sections 2a, 2b, 2c, 2d, 2e, 2f and 2j.</p> | 13/07/2010 |
| Variation application (EPR/TP3231KR/V003) | <p>The response to questions in the following parts of the application form:</p> <p>Part C3 – tables 1a, 3, 4 & 5, Part C3 – sections 4 to 6</p> | 12/10/2010 |

| Table S1.3 Improvement programme requirements | | |
|--|---|-------------|
| Reference | Requirement | Date |
| IC1 | <p>The operator shall carry out an environmental impact assessment of the emissions from the gas engines, which evaluates the potential impact of the monitored parameters based on the maximum limits in table S3.1. The assessment shall be carried out using Agency guidance note H1 and shall include air dispersion modelling if required by H1 criteria.</p> <p>A copy of the impact assessment shall be submitted to the Agency.</p> | Completed |
| IC2 | <p>The operator shall undertake a noise assessment in accordance with procedures given in BS4142:1990 (description and measurement of environmental noise) or other methodology as agreed with the Agency. Any noise source(s) identified as exhibiting tonal contributions shall be quantified by means of frequency analysis. Noise measurement shall be undertaken by an experienced and suitably qualified person. On completion of the assessment a copy of the survey shall be submitted to the Agency in the form of a report, with interpretation of the results and conclusions and recommendations drawn.</p> | Completed |

| Table S1.3 Improvement programme requirements | | |
|--|---|-------------|
| Reference | Requirement | Date |
| IC3 | <p>The operator shall produce an odour management plan in accordance with Agency guidance H4 – Odour Management. The odour management plan should, as a minimum, contain the following elements:</p> <ul style="list-style-type: none"> an assessment of the risk of odour problems, from normal and abnormal situations, including worse case scenarios, for example weather, temperature, or breakdowns as well as accident scenarios; information regarding the appropriate controls (both physical and management) needed to manage those risks; details of appropriate odour monitoring proposals including a daily log of odour observations from AD plant feedstock storage areas, outside the waste reception building and from the digestate storage tanks an outline of the actions to be taken, contingency plans and responsibilities of staff in the event of a serious odour pollution incident; regular review of the effectiveness of odour control measures; <p>A copy of the odour management plan shall be submitted to the Agency and shall be implemented by the operator from the date of approval in writing by the Agency.</p> | Completed |
| IC4 | <p>A comprehensive report, with associated drawings and engineering specifications shall be submitted to the Agency, detailing the construction and maintenance of hard-standing areas, kerbing, containment for raw materials, intermediate storage tank details, product storage tank details and any other waste storage areas.</p> | Completed |
| IC5 | <p>A report shall be provided which included details of the site drainage and construction, which includes evidence of the containment capacity of the containment bund and impermeability of the ground, through in-situ tests or other means. An assessment of the design of the containment bunding around the site shall also be undertaken, which will take into account the suitability of the material used, strength to dynamic loading and impermeability to digestate or other liquids.</p> | Completed |
| IC6 | <p>In accordance Agency Guidance Horizontal Guidance Note H1 – Annex (a), an accident management and risk assessment shall be provided for the infrastructure and associated activities identified in IC4 above, in order to demonstrate that appropriate measures are in place to prevent, or where that is not practicable, to minimise leakage and spillage from primary containers. The accident management plan shall include, but not be limited to the following scenarios:</p> <ul style="list-style-type: none"> Spillage during transferring of substances (loading or unloading); Plant and/or equipment failure (e.g. over pressure of vessels and pipework, blocked drains); Containment failure (e.g. catastrophic tank failure, bund failure or failure of site drainage system); Failure of leak detection system for the digestate storage tanks; Vehicle strike of tanks; Vandalism (pipe work tampered with, valves opened). | Completed |
| IC7a | <p>The operator shall set up and maintain a daily log of odour observations from AD plant feedstock storage areas, outside the waste reception building and from the digestate storage tanks. Records shall include the date, time, wind direction and location of the observation.</p> <p>The observations specified above shall continue until this requirement is cancelled by the Agency.</p> | Completed |

| Table S1.3 Improvement programme requirements | | |
|--|---|-------------|
| Reference | Requirement | Date |
| IC7b | After 12 months of continuous observations as required by IC7a, the operator shall produce a written report including a copy of the logged observations and any conclusions that can be drawn, which shall be submitted to the Agency. | Completed |
| IC8 | The digestate storage lagoon shall be installed and constructed in accordance with the measures stated in the Non-technical Summary submitted with the application dated 12 October 2010. Upon completion of the installation work, the operator shall submit as-built drawings and construction details to the Agency. | Completed |
| IC9 | The operator shall provide a copy of the inspection and maintenance plan for the digestate storage lagoon to the Agency for approval. The plan shall be implemented upon approval in writing by the Agency. | Completed |
| IC10 | The operator shall set up and maintain a daily log of odour observations from the digestate storage lagoon. Records shall include the date, time, wind direction and location of the observation. The data shall be used to determine whether there is a requirement to retrofit a cover to the lagoon. | Completed |

Schedule 2 – Waste types, raw materials and fuels

| Table S2.1 Raw materials and fuels | |
|------------------------------------|--|
| Raw materials and fuel description | Specification |
| Maize, grass or wheat silage | Substantially free of non vegetable matter |

| Table S2.2 Permitted waste types and quantities for anaerobic digestion | |
|---|---|
| Maximum quantity | Annual throughput shall not exceed 60,000 tonnes |
| Waste code | Description |
| 02 | Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing, food preparation and processing |
| 02 01 | wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing |
| 02 01 01 | sludges from washing and cleaning |
| 02 01 02 | animal-tissue waste |
| 02 01 03 | plant-tissue waste |
| 02 01 06 | animal faeces, urine and manure including spoiled straw |
| 02 01 07 | wastes from forestry |
| 02 01 99 | residues from commercial mushroom cultivation |
| 02 02 | wastes from the preparation and processing of meat, fish and other foods of animal origin |
| 02 02 01 | sludges from washing and cleaning <i>Process water and food washing waste only</i> |
| 02 02 02 | animal-tissue waste – Category 3ABP including blood, animal flesh, fish processing waste, fish carcasses, poultry waste |
| 02 02 03 | materials unsuitable for consumption or processing – coffee, food processing waste, jam, kitchen waste, fruit, vegetable oil, tobacco, tea, vegetable waste – waste fat from processing of meat or fish. |
| 02 02 99 | non specified sludges from gelatine production and animal gut contents |
| 02 03 | wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea and tobacco preparation and processing; conserve production; yeast and yeast extract production, molasses preparation and fermentation |
| 02 03 01 | sludges from washing, cleaning, peeling, centrifuging and separation |
| 02 03 02 | sludges from washing, cleaning, peeling, centrifuging and separation – coffee, mushroom compost, food processing waste, food washing waste, tobacco |
| 02 03 04 | biodegradable materials unsuitable for consumption or processing (other than those containing hazardous substances) |
| 02 03 05 | effluent from the processes referred to in sources of waste |
| 02 03 99 | non specified - sludge from production of edible fats and oils, seasoning residues, molasses residues, residues from production of potato, corn or rice starch |
| 02 04 | wastes from sugar processing |
| 02 04 03 | sludges from on-site effluent treatment <i>Biological sludge only</i> |

| Table S2.2 Permitted waste types and quantities for anaerobic digestion | |
|--|---|
| Maximum quantity | Annual throughput shall not exceed 60,000 tonnes |
| Waste code | Description |
| 02 04 99 | other biodegradable wastes |
| 02 05 | wastes from the dairy products industry |
| 02 05 01 | biodegradable materials unsuitable for consumption or processing (other than those containing hazardous substance) – food condemned, food processing wastes, biscuits, chocolate, yeast, bread, bakery wastes. |
| 02 05 02 | sludges from on-site effluent treatment |
| 02 06 | wastes from the baking and confectionery industry |
| 02 06 01 | biodegradable materials unsuitable for consumption or processing (other than those containing hazardous substances) food condemned, food processing wastes, biscuits, chocolate, yeast, bread, bakery wastes |
| 02 06 03 | sludges from on-site effluent treatment |
| 02 07 | wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa) |
| 02 07 01 | wastes from washing, cleaning and mechanical reduction of raw materials - brewing waste, food processing waste, fermentation waste |
| 02 07 02 | wastes from spirits distillation including spent grains, fruit and potato pulp, sludge from distilleries |
| 02 07 04 | biodegradable materials unsuitable for consumption or processing (other than those containing hazardous substances) brewing waste, food processing waste, fermentation waste, beer, alcoholic drinks, fruit juice |
| 02 07 05 | sludges from on-site effluent treatment |
| 02 07 99 | spent grains, hops and yeast filter sheets / cloths |
| 03 | Wastes from wood processing and the production of panels and furniture, pulp, paper and cardboard |
| 03 03 | wastes from pulp, paper and cardboard production and processing |
| 03 03 02 | green liquor sludge – paper sludge, green liquor |
| 03 03 08 | wastes from sorting of paper and cardboard destined for recycling – cardboard, newspaper, tissues, paper |
| 03 03 10 | fibre rejects and sludges - paper pulp (de-inked only), paper fibre |
| 04 | Wastes from the leather, fur and textile industries |
| 04 01 | wastes from the leather and fur industry |
| 04 01 01 | fleshings and lime split wastes |
| 04 01 05 | tanning liquor free of chromium |
| 04 01 07 | sludges not containing chromium |
| 04 02 | wastes from the textile industry |
| 04 02 10 | organic matter from natural products, e.g. grease, wax |
| 07 | Wastes from organic chemical processes |
| 07 01 | wastes from the manufacture, formulation, supply and use (MFSU) of basic organic chemicals |
| 07 02 13 | Waste plastic – must confirm to BS EN 13432 |

| Table S2.2 Permitted waste types and quantities for anaerobic digestion | |
|--|--|
| Maximum quantity | Annual throughput shall not exceed 60,000 tonnes |
| Waste code | Description |
| 15 | Waste packaging, absorbents, wiping cloths, filter materials and protective clothing not otherwise specified |
| 15 01 | packaging (including separately collected municipal packaging waste) |
| 15 01 01 | paper and cardboard packaging -must conform to BS EN 13432 – no manmade substances |
| 15 01 02 | plastic packaging <i>must conform to BS EN 13432</i> |
| 15 01 03 | wooden packaging |
| 15 01 05 | composite packaging must conform to BS EN 13432 |
| 19 | Wastes from waste management facilities, off-site waste water treatment plants and the preparation of water intended for human consumption and water for industrial use |
| 19 02 | wastes from physico/chemical treatments of waste (including dechromatation, decyanidation, neutralisation) |
| 19 02 09 | glycerol |
| 19 02 10 | combustible wastes |
| 19 05 | wastes from aerobic treatment of solid wastes |
| 19 05 01 | non-composted fraction of municipal and similar wastes |
| 19 05 02 | non-composted fraction of animal and vegetable waste |
| 19 05 03 | off-specification compost <i>from source segregated biodegradable waste</i> |
| 19 05 99 | compost leachate from composting sites |
| 19 06 | wastes from anaerobic treatment of waste |
| 19 06 03 | liquor from anaerobic treatment of municipal waste |
| 19 06 04 | digestate from anaerobic treatment of source segregated biodegradable waste |
| 19 06 05 | liquor from anaerobic treatment of animal and vegetable waste <i>Restriction: Acceptable only if derived solely from input types allowed by the Anaerobic Digestate Quality Protocol and remains segregated from, and uncontaminated by, any other waste type</i> |
| 19 08 | wastes from waste water treatment plants not otherwise specified |
| 19 08 09 | grease and oil mixture from oil/water separation containing edible oils and fats |
| 19 08 12 | sludges from biological treatment of industrial treatment |
| 20 | Municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions |
| 20 01 | municipal wastes (household waste and similar commercial, industrial and institutional wastes) including separately collected fractions |
| 20 01 01 | paper and cardboard |
| 20 01 08 | biodegradable kitchen and canteen waste |
| 20 01 25 | edible oil and fat |
| 20 02 | garden and park wastes (including cemetery waste) |
| 20 02 01 | biodegradable waste - animal faeces, manure, garden waste, horticultural waste, |

| Table S2.2 Permitted waste types and quantities for anaerobic digestion | |
|--|---|
| Maximum quantity | Annual throughput shall not exceed 60,000 tonnes |
| Waste code | Description |
| | plant tissue, parks and garden waste, hedge and tree trimmings, grass cuttings and leafy materials only |
| 20 03 | other municipal wastes |
| 20 03 01 | mixed municipal waste <i>separately collected biowastes</i> |
| 20 03 02 | waste from markets- <i>market waste allowed only if source segregated biodegradable fractions, e.g. plant material, fruit and vegetables.</i> |

| Table S2.3 Waste types to be accepted at digestate storage lagoon, shall not exceed 20,000 per annum | |
|---|---|
| Exclusions | <p>Wastes having any of the following characteristics shall not be accepted:</p> <ul style="list-style-type: none"> - consisting solely or mainly of dusts (except sawdust), powders, or loose fibres - Waste containing Hazardous substances (as defined in the Groundwater Regulations) <p>Waste that may give rise to the introduction into groundwater of any Non-hazardous pollutants so as to cause pollution (as defined in the Groundwater Regulations)</p> |
| Waste code | Description |
| 19 06 | wastes from anaerobic treatment of waste |
| 19 06 03 | liquor from anaerobic treatment of municipal waste |
| 19 06 04 | digestate from anaerobic treatment of source segregated municipal waste |
| 19 06 05 | liquor from anaerobic treatment of animal and vegetable waste |

Schedule 3 – Emissions and monitoring

| Emission point ref. & location | Source | Parameter | Limit (including unit) | Reference period | Monitoring frequency | Monitoring standard or method |
|--|--------------------------------------|---|------------------------|-------------------------------|--------------------------------|---|
| A1 [Exhaust Stacks on site plan in Schedule 7] | Exhaust stack on gas engine [note 1] | Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂) | 500 mg/m ³ | Hourly average | Annual | In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air" |
| | | Sulphur dioxide | 150 mg/m ³ | | | |
| | | Carbon monoxide | 1400 mg/m ³ | | | |
| | | Total VOCs | 1000 g/m ³ | | | |
| | | Non methane volatile organic compounds (NMVOCs) | 75 mg/m ³ | | | |
| A2 [Exhaust Stacks on site plan in schedule 7] | Exhaust stack on gas engine [note 1] | Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂) | 500 mg/m ³ | Hourly average | Annual | In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air" |
| | | Sulphur dioxide | 150 mg/m ³ | | | |
| | | Carbon monoxide | 1400 mg/m ³ | | | |
| | | Total VOCs | 1000 g/m ³ | | | |
| | | Non methane volatile organic compounds (NMVOCs) | 75 mg/m ³ | | | |
| A3 [Auxiliary Flare on site plan in schedule 7] | Emergency flare [note 2] | Oxides of Nitrogen (NO and NO ₂ expressed as NO ₂) | 150 mg/m ³ | Hourly average Hourly mean | Annually | In accordance with that described in the Agency's Technical Guidance Note M2 "Monitoring of stack emissions to air" |
| | | Carbon monoxide | 50 mg/m ³ | | | |
| | | Total VOCs | 10 mg/m ³ | | | |
| | | Non methane volatile organic compounds | 5 mg/m ³ | | | |
| | | Operational Temperature | >1000°C | | Weekly while flare operational | |

| Table S3.1 Point source emissions to air – emission limits and monitoring requirements | | | | | | |
|--|----------------------------|--|-------------------------------|-------------------------|---|--------------------------------------|
| Emission point ref. & location | Source | Parameter | Limit (including unit) | Reference period | Monitoring frequency | Monitoring standard or method |
| A4 [Biofilter on site plan in schedule 7] | Biofilter stack or vent(s) | Temperature, moisture and thatching/compaction | | | Biofilters should be checked and maintained to ensure appropriate temperature and moisture content on a daily basis | n/a |
| <p>Note 1 – These limits are based on normal operating conditions and load – temperature 0°C (273K); pressure: 101.3 kPa and oxygen: 5 per cent (dry gas). The measurement uncertainty specified in LFTGN08 v2 2010 shall apply.</p> <p>Note 2 – These limits are based on normal operating conditions and load – temperature 0°C (273K); pressure: 101.3 kPa and oxygen: 3 per cent (dry gas). The measurement uncertainty specified in LFTGN05 v2 2010 shall apply.</p> <p>Note 3 – Monitoring to be undertaken in the event the emergency flare has been operational for more than 10 per cent of a year (876 hours). Record of operating hours to be submitted annually to the Environment Agency.</p> | | | | | | |

| Table S3.2 Process monitoring requirements | | | | |
|---|------------------|-----------------------------|--------------------------------------|--|
| Emission point reference or source or description of point of measurement | Parameter | Monitoring frequency | Monitoring standard or method | Other specifications |
| AD Plant feedstock, waste reception building, digestate storage tanks and digestate storage lagoon. | Odour | Daily | Olfactory monitoring | Odour detection in accordance with Table S1.3 IC3, IC7a and IC10 |

Schedule 4 – Reporting

Parameters, for which reports shall be made, in accordance with conditions of this permit, are listed below.

| Table S4.1 Reporting of monitoring data | | | |
|--|---|---|---------------------------------------|
| Parameter | Emission or monitoring point/reference | Reporting period | Period begins |
| Emissions to air | A1, A2, A3 A4. | Every 12 months or as agreed in writing by the Environment Agency | 1 January, 1 April, 1 July, 1 October |

| Table S4.2 Annual production/treatment | |
|---|----------------|
| Parameter | Units |
| Liquid digestate exported from storage lagoon | M ³ |
| Solid digester residue exported from installation | tonnes |

| Table S4.3 Performance parameters | | |
|--|--------------------------------|--------------|
| Parameter | Frequency of assessment | Units |
| Electrical energy generated | Annually | MWh |
| AD gas flare operating hours | Annually | hours |
| Total AD feed material used | Annually | tonnes |

| Table S4.4 Reporting forms | | |
|-----------------------------------|---|---------------------|
| Media/parameter | Reporting format | Date of form |
| Water | Form water 1 or other form as agreed in writing by the Environment Agency | 09/10/15 |
| Air | Form air 1 or other form as agreed in writing by the Environment Agency | 09/10/15 |
| Energy usage | Form energy 1 or other form as agreed in writing by the Environment Agency | 09/10/15 |
| Other performance indicators | Form performance 1 or other form as agreed in writing by the Environment Agency | 09/10/15 |
| Waste returns | E-waste Return Form | -- |

Schedule 5 – Notification

These pages outline the information that the operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the EP Regulations.

Part A

| | |
|--------------------------------|--|
| Permit Number | |
| Name of operator | |
| Location of Facility | |
| Time and date of the detection | |

| | |
|---|--|
| (a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or emission of a substance not controlled by an emission limit which has caused, is causing or may cause significant pollution | |
| To be notified within 24 hours of detection | |
| Date and time of the event | |
| Reference or description of the location of the event | |
| Description of where any release into the environment took place | |
| Substances(s) potentially released | |
| Best estimate of the quantity or rate of release of substances | |
| Measures taken, or intended to be taken, to stop any emission | |
| Description of the failure or accident. | |

| | |
|---|--|
| (b) Notification requirements for the breach of a limit | |
| To be notified within 24 hours of detection unless otherwise specified below | |
| Emission point reference/ source | |
| Parameter(s) | |
| Limit | |
| Measured value and uncertainty | |
| Date and time of monitoring | |
| Measures taken, or intended to be taken, to stop the emission | |

| Time periods for notification following detection of a breach of a limit | |
|---|----------------------------|
| Parameter | Notification period |
| | |
| | |
| | |

| (c) Notification requirements for the detection of any significant adverse environmental effect | |
|--|--|
| To be notified within 24 hours of detection | |
| Description of where the effect on the environment was detected | |
| Substances(s) detected | |
| Concentrations of substances detected | |
| Date of monitoring/sampling | |

Part B – to be submitted as soon as practicable

| | |
|--|--|
| Any more accurate information on the matters for notification under Part A. | |
| Measures taken, or intended to be taken, to prevent a recurrence of the incident | |
| Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission | |
| The dates of any unauthorised emissions from the facility in the preceding 24 months. | |

| | |
|-----------|--|
| Name* | |
| Post | |
| Signature | |
| Date | |

* authorised to sign on behalf of the operator

Schedule 6 – Interpretation

“accident” means an accident that may result in pollution.

“ADQP” means Anaerobic Digestion Quality Protocol

“anaerobic digestion” means a process of controlled decomposition of biodegradable materials under managed conditions where free oxygen is absent, at temperatures suitable for naturally occurring mesophilic or thermophilic anaerobes and facultative anaerobe bacteria species, which convert the inputs to a methane-rich biogas and whole digestate.

“animal waste” means any waste consisting of animal matter that has not been processed into food for human consumption.

“application” means the application for this permit, together with any additional information supplied by the operator as part of the application and any response to a notice served under Schedule 5 to the EP Regulations.

“authorised officer” means any person authorised by the Environment Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in section 108(4) of that Act.

“building” means a construction that has the objective of providing sheltering cover and minimising emissions of noise, particulate matter, odour and litter.

“digestate” means material resulting from an anaerobic digestion process.

“disposal”. Means any of the operations provided for in Annex I to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“emissions of substances not controlled by emission limits” means emissions of substances to air, water or land from the activities, either from the emission points specified in schedule 3 or from other localised or diffuse sources, which are not controlled by an emission limit.

“emissions to land” includes emissions to groundwater.

“EP Regulations” means The Environmental Permitting (England and Wales) Regulations SI 2010 No.675 and words and expressions used in this permit which are also used in the Regulations have the same meanings as in those Regulations.

“groundwater” means all water, which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.

“impermeable surface” means a surface or pavement constructed and maintained to a standard sufficient to prevent the transmission of liquids beyond the pavement surface.

“Industrial Emissions Directive” means DIRECTIVE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 24 November 2010 on industrial emissions

“Industry Standard Protocol” means “A standardised protocol for the monitoring of bioaerosols at open composting facilities” published by the Association for Organics Recycling and developed in conjunction with the Environment Agency.

“MCERTS” means the Environment Agency’s Monitoring Certification Scheme.

“pests” means Birds, Vermin and Insects.

“quarter” means a calendar year quarter commencing on 1 January, 1 April, 1 July or 1 October.

“recovery” means any of the operations provided for in Annex II to Directive 2008/98/EC of the European Parliament and of the Council on waste.

“sealed drainage system” in relation to an impermeable surface, means a drainage system with impermeable components which does not leak and which will ensure that:

- no liquids will run off the surface otherwise than via the system
- all liquids entering the system are collected in a sealed sump, except where liquids may be lawfully discharged to foul sewer.

“treated wood” means any wood that has been chemically treated (e.g. to enhance or alter the performance of the original wood). Treatments may include penetrating oils, tar oil preservatives, water-borne preservatives, organic-based preservatives, boron and organo-metallic based preservatives, boron and halogenated flame retardants and surface treatments (including paint and varnish).

“Waste code” means the six digit code referable to a type of waste in accordance with the List of Wastes (England) Regulations 2005, or List of Wastes (Wales) Regulations 2005, as appropriate, and in relation to hazardous waste, includes the asterisk.

“Waste Framework Directive” or “WFD” means Waste Framework Directive 2008/98/EC of the European Parliament and of the Council on waste.

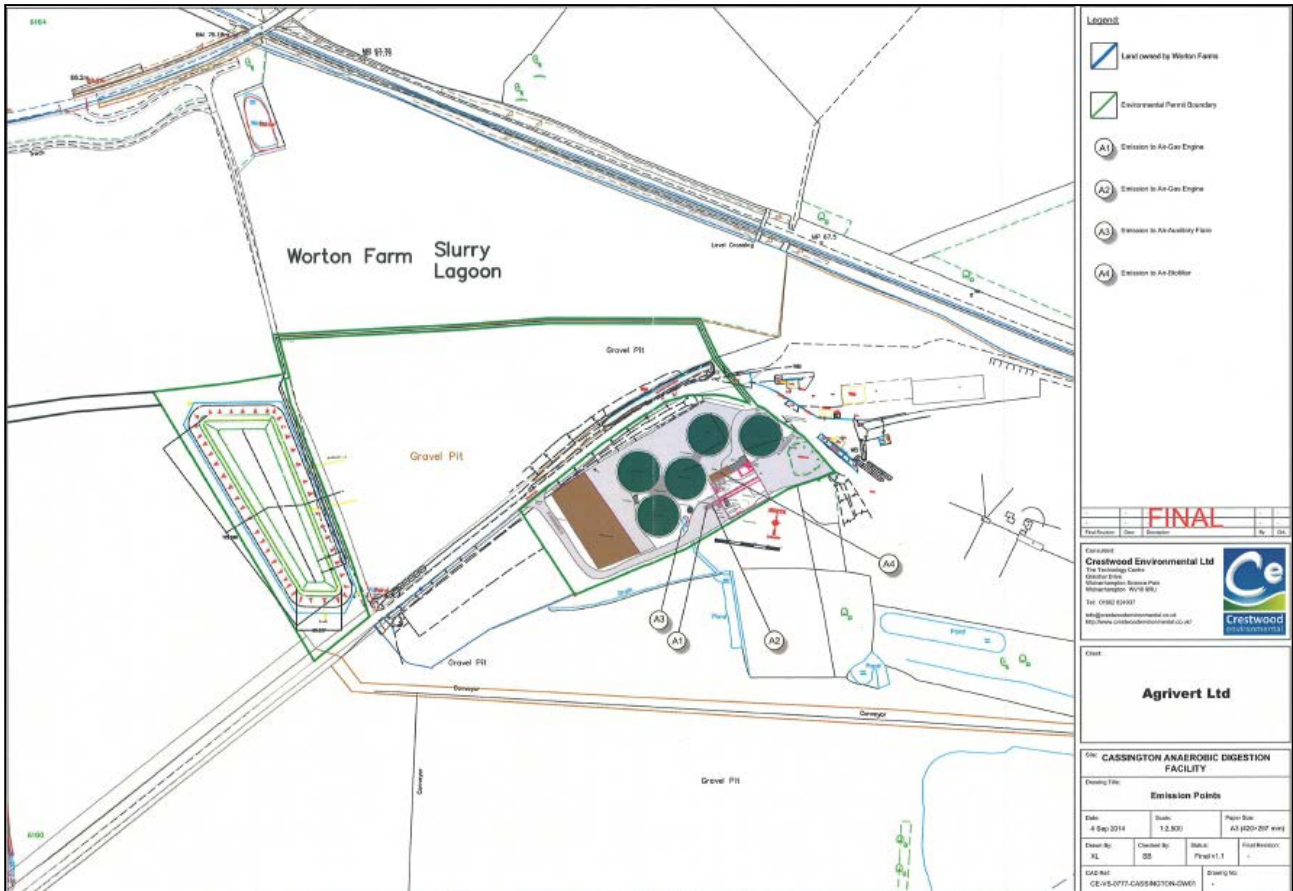
“year” means calendar year ending 31 December.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this permit to concentrations of substances in emissions into air means:

- in relation to emissions from combustion processes, the concentration in dry air at a temperature of 273K, at a pressure of 101.3 kPa and with an oxygen content of 3% dry for liquid fuels, 3% or 5% for gaseous fuels, 6% dry for solid fuels; and/or
- in relation to emissions from non-combustion sources, the concentration at a temperature of 273K and at a pressure of 101.3 kPa, with no correction for water vapour content.

Schedule 7 – Site plan



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END OF PERMIT

Permit Number: ~~EPR/TP3231KR~~ **Operator:** ~~Agrivert Limited~~

Facility: ~~Cassington Anaerobic Digestion Facility~~ **Form Number:** ~~Air1/DD/MM/YY~~

Reporting of emissions to air for the period from DD/MM/YYYY to DD/MM/YYYY

| Emission Point | Substance / Parameter | Emission Limit Value | Reference Period | Result [1] | Test Method [2] | Sample Date and Times [3] | Uncertainty [4] |
|-----------------------|---|-----------------------------|-------------------------|-------------------|------------------------|----------------------------------|------------------------|
| A1 | Oxides of nitrogen (NO and NO ₂ expressed as NO ₂) | 500 mg/m ³ | 1 hour period | | BS-EN 14792 | | |
| A1 | Sulphur dioxide | 350 mg/m ³ | 1 hour period | | BS-EN 14791 | | |
| A1 | Carbon monoxide | 1400 mg/m ³ | 1 hour period | | BS-EN 15058 | | |
| A1 | Total VOCs | 1000 mg/m ³ | 1 hour period | | BS-EN 12619:2013 | | |
| A1 | Non-methane volatile organic compounds (NVOCs) | 75 mg/m ³ | 1 hour period | | | | |
| A2 | Oxides of nitrogen (NO and NO ₂ expressed as NO ₂) | 500 mg/m ³ | 1 hour period | | BS-EN 14792 | | |
| A2 | Carbon monoxide | 1400 mg/m ³ | 1 hour period | | BS-EN 15058 | | |
| A2 | Sulphur dioxide | 350 mg/m ³ | 1 hour period | | BS-EN 14791 | | |
| A2 | Total VOCs | 10 mg/m ³ | 1 hour period | | BS-EN 12619:2013 | | |

| Emission Point | Substance / Parameter | Emission Limit Value | Reference Period | Result [1] | Test Method [2] | Sample Date and Times [3] | Uncertainty [4] |
|-----------------------|--|-----------------------------|-------------------------|-------------------|------------------------|----------------------------------|------------------------|
| A2 | Non-methane volatile organic compounds (NVOCs) | 75 mg/m ³ | 1-hour period | | | | |

[1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

[3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed Date

(Authorised to sign as representative of Operator)

Permit Number: AB1234CD **Operator:** [Operator name]

Facility: [Facility name] **Form Number:** Air1 / 09/10/15

Reporting of emissions to air for the period from DD/MM/YYYY to DD/MM/YYYY

| Emission Point | Substance / Parameter | Emission Limit Value | Reference Period | Result [1] | Test Method [2] | Sample Date and Times [3] | Uncertainty [4] |
|-----------------------|------------------------------|-----------------------------|-------------------------|-------------------|------------------------|----------------------------------|------------------------|
| A1 | | | | | | | |
| A2 | | | | | | | |
| A3 | | | | | | | |
| A4 | | | | | | | |

[1] The result given is the maximum value (or the minimum value in the case of a limit that is expressed as a minimum) obtained during the reporting period, expressed in the same terms as the emission limit value. Where the emission limit value is expressed as a range, the result is given as the 'minimum – maximum' measured values.

[2] Where an internationally recognised standard test method is used the reference number is given. Where another method that has been formally agreed with the Environment Agency is used, then the appropriate identifier is given. In other cases the principal technique is stated, for example gas chromatography.

[3] For non-continuous measurements the date and time of the sample that produced the result is given. For continuous measurements the percentage of the process operating time covered by the result is given.

[4] The uncertainty associated with the quoted result at the 95% confidence interval, unless otherwise stated.

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/TP3231KR

Operator: Agrivert Limited

**Facility: Cassington Anaerobic
 digestion Facility**

Form Number: WaterUsage1 / 09/10/15

Reporting of Water Usage for the year

| Water Source | Usage (m³/year) | Specific Usage (m³/unit output) |
|--------------------------|-----------------------------------|---|
| Mains water | | |
| TOTAL WATER USAGE | | |

Operator's comments:

Signed

Date.....

(authorised to sign as representative of Operator)

Permit Number: **EPR/TP3231KR** **Operator:** **Agrivert Limited**

Facility: **Cassington Anaerobic** **Form Number:** **Energy1 / 09/10/15**
 Digestion Facility

Reporting of Energy Usage for the year

| Energy Source | Energy Usage | | Specific Usage (MWh/unit output) |
|--------------------|--------------|----------------------|----------------------------------|
| | Quantity | Primary Energy (MWh) | |
| Electricity * | MWh | | |
| Natural Gas | MWh | | |
| Gas Oil | tonnes | | |
| Recovered Fuel Oil | tonnes | | |
| Biogas | tonnes | | |
| TOTAL | - | | |

* Conversion factor for delivered electricity to primary energy = 2.4

| |
|----------------------|
| Operator's comments: |
|----------------------|

Signed

Date.....

(Authorised to sign as representative of Operator)

Permit Number: EPR/TP3231KR Operator: Agrivert Limited

Facility: Cassington Anaerobic Form Number: Performance1 / 09/10/15
Digestion Facility

Reporting of other performance indicators for the period DD/MM/YYYY to DD/MM/YYYY

| Parameter | Units |
|----------------------------|--------------|
| Total raw material used | tonnes |
| Electrical power generated | MWh |
| Liquid digestate produced | Cubic metres |
| Solid digestate produced | tonnes |
| Flare operating hours | hours |
| Gas engine operating hours | hours |

Operator's comments:

Signed

Date.....

(Authorised to sign as representative of Operator)